Customer No.: 31561
Application No.: 10/064,238
Docket NO.: 8868-US-PA

AMENDMENTS

To the Claims:

Please amend the claims according to the following listing of claims and substitute it for all prior versions and listings of claims in the application.

Claim 1 (currently amended) A method for hardware reduction in an echo canceller, comprising:

applying an N (N is a positive integer) times divide frequency sampling operation onto an input data list of the echo canceller, and the frequency-divided input data list is then transmitted to the echo canceller for performing an echo signal cancellation operation on the frequency-divided input data list;

applying an N times multiply frequency sampling operation onto an output data list of the echo canceller to generate a multiplied frequency data list; and

applying a low pass filter operation with a low pass filter onto the multiplied frequency data list to generate a low pass data list, wherein a cutoff frequency of the low pass filter is 1/(2N) times of the sampling frequency of the input data list.

Claim 2 (original) The method of claim 1, wherein a sampling frequency of the N times divide frequency sampling operation is adjustable.

Claim 3 (original) The method of claim 1, wherein a sampling frequency of the N times multiply frequency sampling operation is adjustable.

Claim 4 (original) The method of claim 1, wherein the low pass data list is used to eliminate a far-end echo signal.

Claims 5-6 (canceled)

Claim 7 (original) The method of claim 1, wherein the method is used in a receiver inside a transceiver.

Claim 8 (original) The method of claim 1, wherein the echo canceller adopts a finite impulse response filter.

Claim 9 (currently amended) A method for hardware reduction in a near-end crosstalk canceller, comprising:

applying an N (N is a positive integer) times divide frequency sampling operation onto an input data list of the near-end crosstalk canceller;

applying an N times multiply frequency sampling operation onto an output data list of the near-end crosstalk canceller to generate a multiplied frequency data list; and

applying a low pass filter operation with a low pass filter onto the multiplied frequency data list to generate a low pass data list, wherein a cutoff frequency of the low pass filter is 1/(2N) times of the sampling frequency of the input data list.

Claim 10 (original) The method of claim 9, wherein a sampling frequency of the N times divide frequency sampling operation is adjustable.

Claim 11 (original) The method of claim 9, wherein a sampling frequency of the N times multiply frequency sampling operation is adjustable.

Claim 12 (original) The method of claim 9, wherein the low pass data list is used to eliminate a near-end crosstalk signal.

Claims 13-14 (canceled)

Claim 15 (original) The method of claim 9, wherein the method is used in a receiver inside a transceiver.

Claim 16 (original) The method of claim 9, wherein the near-end crosstalk canceller adopts a finite impulse response filter.